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#### The Royal Society of London

## PHILOSOPHICAL TRANSACTIONS

Volume 38 1733-1734

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NEW YORK 1963

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### PHILOSOPHICAL TRANSACTIONS

Volume 38 1733-1734

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GIVING SOME

## ACCOUNT

OF THE

Present Undertakings, Studies, and Labours

OF THE

### INGENIOUS,

IN MANY

Confiderable Parts of the WORLD.

VOL. XXXVIII. For the Years 1733, 1734.

#### LONDON:

Printed for W.Innys and R. Manby, Printers to the Royal Society, at the West End of St. Paul's. 1735.

### ROGERGALE, Efq;

VICE-PRESIDENT and TREASURER

OF THE

### ROYAL SOCIETY

o f

L O N D O N

FOR

Promoting NATURAL KNOWLEDGE,

This Thirty-Eighth VOLUME of

Philosophical Transactions

Is humbly Dedicated by

His most obedient, and

Most humble Servant,

CROMWELL MORTIMER, R.S. Secr.

For the Months of January, February, and March, 1733.

- I. A Catalogue of the fifty Plants from Chelsea-Garden, presented to the Royal Society by the Company of Apothecaries, for the Year 1731; purfuant to the Direction of Sir Hans Sloane, Bart. Med. Reg. Pras. Col. Reg. Med. & Soc. Rég. By Isaac Rand, Apothecary, F. R. S.
- II. An Explanation of an Essay on the Use of the Bile in the Animal Oeconomy, by Alexander Stuart, M. D. Physician in Ordinary to her Majesty, F. R. S. and of the College of Physicians. Vide No. 414.
- III. A Catalogue of Eclipses of Jupiter's Satellites for the Year 1734. By James Hodgson, F. R. S. Master of the Royal Mathematical School at Christ's Hospital, London. IV. De

- IV. De Sciuro volante, sive Muro Pontico, aut Scythico Gesneri, & Vespertilione admirabili Bontij Dissertatio, per D<sup>n</sup>. Hans Sloane, Bart. Pr. R. S. à Jacobo Theodoro Klein, Reip. Gedanens. à Secret. R. S. S. communicata.
- V. A Description of a Barometer, wherein the Scale of Variation may be encreased at Pleasure. By the Reverend Mr. John Rowning, Fellow of Magdalen-College in Cambridge; Communicated by Dr. Smith, F.R.S. Astrom. Prof. in Acad. Cantabr.
- VI. An Account of a Book, intituled Christiani Ludov. Gersten Tentamina Systematis novi ad mutationes Barometri ex natura elateris aërei demonstrandas, cui adjecta sub sinem, Dissertatio Roris decidui errorem antiquum & vulgarem per observationes & experimenta nova excutiens. Francosurti MDCCXXXIII, in 800.

For the Months of April, May and June, 1733.

#### The CONTENTS.

I. An Account of the Experiments shewn by Sigismund August Frobenius, M. D. F. R. S. at a Meeting of the Royal Society on Nov. 18, 1731, with his Spiritus Vini Æthereus, and the Phosphorus Urinæ, from the Minutes of that Day, by Cromwell Mortimer, M. D. R. S. Secr.

II. An Account of some Experiments upon the Phosphorus Urinæ, which may serve as an Explanation to those shewn to the Royal Society by Dr. Frobenius, on Nov. 18, 1731, together with several Observations tending to explain the Nature of that wonderful Chemical Production, by Mr. Ambrose Godfrey Hanckewitz, Chemist, F. R. S.

III. Observations of the Appearances among the Fix'd Stars, called Nebulous Stars. ByW. Derham,

D. D. Canon of Windsor, F. R. S.

IV. An Account of some Magnetical Observations made in the Months of May, June and July, 1732, in the Atlantick or Western Ocean; as also the Description of a Water-Spout, by Mr. Jos. Harris. Communicated by Mr. George Graham, F. R. S. V. HI-

V. HISTORIA TERRÆMOTUS Apuliam & totum ferè Neapolitanum Regnum, Anno 1731, vexantis. A Nicolao Cyrillo, in Regià Universuate Neapolitana, Pr. Med. Prof. & R. S. S.

VI. Observatio Ecclipseus Lunaris Romæ habita Die 1 Dec. 1732, St. N. in Ædibus Eminentiss. de VI A, à D. Didaco Revillas Abbate Hieronymiano, Abbate Joanne Botrario, & Eustachio Manfredio.

VII. The same Eclipse of the Moon observed in Fleetstreet, London, Nov. 20, 1732, St. V. at Night, by Mr. Geo. Graham and Mr. Hodgson, F. R. S.

VIII. The Bills of Mortality for the Town of Dresden, for a whole Century, viz. from the Year 1617 to 1717, containing the Numbers of Marriages, Births, Burials, and Communicants. Communicated by Sir Conrad Sprengell, M.D. F. R. S.

IX. The Bills of Mortality for the Imperial City of Augsburg, from the Year 1501 to 1720 inclufive, containing the Number of Births, Marriages, and Burials. Communicated by the same.

X. Remarks upon the aforefaid Bills of Mortality for the Cities of Dresden and Augsburgh. Mr. William Maitland, F. R. S.

For the Months of July, Aug. Sept. and Oct. 1733.

#### The CONTENTS.

I. An Account of Symptoms arising from eating the Seeds of Henbane, with their Cure, &c. and some occasional Remarks, by Sir Hans Sloane, Bart. Pr. S. R.

II. An Abstract of the Meteorological Diaries, communicated to the Royal Society, with Remarks upon them. By Wm. Derham, D. D. Canon of Windsor, and F. R. S. PART II.

III. An Account of the damp Air in a Coal-Pit of Sir James Lowther, Bart. Junk within 20 Yards of the Sea; communicated by him to the Royal Society.

IV. An Observation of the Eclipse of the Sun on May 2, 1733, in the Afternoon. By Mr. G. Graham, F. R. S. in Fleet-street, London.

V. A Letter from Mr. Stephen Gray, F. R. S. to the Publisher, containing an Account of the same Eclipse of the Sun, as observed by himself at Norton-Court: and at Otterden-Place, By Granvill Wheler Esq; F. R. S. both in Kent.

VI. An Observation of the same Eclipse of the Sun, by Mr. J. Milner, at Yeovil in Somersetshire, communicated in a Letter to Dr. John Allen, M. D. F. R. S.

VII. Nonnulla Jovis Satellitum Eclipses Bononia, Observata ab Eustachio Manfredi.

VIII. A

VIII. A Letter from Mr. Richard Lewis, at Annapolis in Maryland, to Mr. Collinson, F. R. S. containing the Account of a remarkable Generation of Insects; of an Earthquake; and of an Explosion in the Air.

IX. A Letter from Mr. Evan Davis to Mr. John Eames, F. R. S. concerning some Children inoculated with the Small-Pox, at Haverford-West in Pembrokeshire.

Pembrokeinire.

X. Observations of the Variations of the Needle and Weather, made in a Voyage to Hudson's-Bay, in the Year 1731, by Capt. Christopher Middleton, communicated to the Royal Society by Mr. Benj. Robins, F. R. S. with a Letter to Mr. Robins.

XI. Observatio Eclipsis Solis totalis cum mora facta Gothoburgi Sveciæ, sub elev. Poli 57° 40'54", d. 2 Maij, stylo Jul. Anni 1733, à Dom. Birgero Vassenio, Lecto-

re Mathem, in Gymnasio Regio Gothoburg.

XII. Proposals for the Improvement of the Hist. of Russia, by publishing, from time to time, separate Pieces to serve for a Collection of all sorts of Memoirs relating to the Transactions and State of that Nation: By Ger. Fred. Muller, Prof. Hist. Petropol. and F. R.S. Translated from the German by Mr. Zolman.

XIII. An Account of an Experiment contrived by G. J. s'Gravelande, F. R. S. Prof. Math. at Leyden, relaing to the Force of moving Bodies, shewn to the Royal Society, by J. T. Desaguliers. LL. D. and F. R. S.

For the Months of November and December, 1733.

- I. HERMANNI BOERHAAVE, A. L. M. Philosoph. & Med. Doct. Medicinæ in Universitate Leidensi Prof. Colleg. Chirurgic. Præs. R. S. Lond. necnon Reg. Scientiar. Acad. Parisiens. Soc. de MERCURIO experimenta.
- II. A Spirit Level to be fixed to a Quadrant for taking a Meridional Altitude at Sea, when the Horizon is not visible. By John Hadley, Esq; V. Pr. R. S.
- III. The Anatomy of a Female Beaver, and an Account of Castor found in her. By C. Mortimer, M. D. R. S. Secret.
  - IV. Aëris Terræque Physica Historia, Anni Biss. 1732. à Nicolao Cyrillo in Universitate Neapolit. Primar. Med. Profess. & R. S. S.

- V. An Account of a Book, entituled Jo. Ph. Breynij, M. D. &c. Dissertatio Physica de Polythalamiis, nova Testaceorum classe, &c. Gedani, 1732, 4to, or a Physical Dissertation of a new Class of Shells, which he stiles Polythalamiums, &c. with fourteen Copper Plates. By Richard-Middleton Massey, M. D. F. R. S. and Hon. F. C. Med. Lond.
- VI. An Account of a Book entituled, Osteographia, or, the Anatomy of the Bones, By William Cheselden, Surgeon to her Majesty, F. R. S. Surgeon to St. Thomas's Hospital, and Member of the Royal Academy of Surgery at Paris. By John Belchier, Surgeon, F. R. S.

For the Months of January, February, and March, 1734.

- I. A Catalogue of the Fifty Plants, from Chelsea Garden, presented to the Royal Society by the Company of Apothecaries, for the Year 1732; pursuant to the Direction of Sir Hans Sloane, Bart. Med. Reg. Præs. Col. Reg. Med. & Soc. Reg. by Isaac Rand, Apothecary, F. R. S.
- II. DE CAMPHORA THYMI. Auctore Casparo Neumanno, M. D. Chemiæ Profess. Berolin. & R. S. S.
- ed after the Malayans, MANGOSTANS; By Laurentius Garcin, M. D. and F. R. S. Translated from the French by Mr. Zollman, F. R. S.

- IV. An Account, by Mr. John Eames, F. R. S. of a Book entitled, TRAITE PHYSIQUE ET HISTORIQUE DE L'AURORE BOREALE, Par Mr. DE MAIRAN. Suite des Memoires de l'Academie Royale des Sciences, Année MDCCXXXI: Or, a Philosophical and Historical Treatise concerning the Aurora Borealis, By Mr. De Mairan; being a Supplement to the Memoires of the Academy of Sciences for the Year 1731.
- V. A Letter from Mons. Du Fay, F. R. S. and of the Royal Academy of Sciences at Paris, to his Grace CHARLES Duke of Richmond and Lenox, concerning Electricity. Translated from the French by T. S. M. D.

I. A

#### LONDON:

Printed for W. INNYs and R. MANBY, Printers to the Royal Society, at the West-End of St. Paul's.

For the Months of April, May, and June, 1734.

#### The CONTENTS.

I. Experiments and Observations on Bulbous Roots, Plants, and Seeds growing in Water, by Mr. William Curteis.

II. A Catalogue of Eclipses of Jupiter's Satellites, for the Year 1735. by James Hodgson, F. R. S. Master of the Royal Mathematical School at Christ's-Hospital, London.

III. The Case of a Man who was poison'd by eating Monks-hood or Napellus; communicated to the Royal Society by Mr. Vincent Bacon, Surgeon, F. R. S.

IV. Descriptio LUMINUM BOREALIUM Vitembergæ Anno CIO IOCC XXXII. conspectorum. Auctore Joh. Frider. Weidlero LL. D. Mathes. Profess. Primar. Vitemberg. R. S. S.

V. Narratio de Erucarum & Locustarum, quæ agros Vitembergæ vicinos aliquot abbinc Annis vastarunt, interitu, Auctore Joh. Frid. Weidlero, R. S. S.

VI. Clau-

- VI. Clausula excerpta, ex Historià Variolarum quæ per Incision'em excitantur, ab E. Timoni, M. D. Scriptâ, R. S. Communicavit Sam. Horseman, M. D.
- VII. An Abstract of a Letter from Petrus Van Muschenbroek, M. D. F. R. S. Professor of Mathematicks and Astronomy in the University of Utrecht, in Holland; to Dr. J. T. Desaguliers, F. R. S. concerning Experiments made on the Indian Magnetick-Sand.
- VIII. An Account of Some Observations made in London, by Mr. George Graham, F. R. S. and at Black River in Jamaica, by Colin Campbell, Esq; F. R. S. concerning the Going of a Clock; in order to determine the Difference between the Lengths of Isochronal Pendulums in those Places. Communicated by J. Bradley, M. A. Astr. Prof. Savill. Oxon. F. R. S.
- IX. A Continuation of an Account of an Essay towards a Natural History of Carolina, and the Bahama Islands, by Mr. Mark Catesby, F. R. S. with some Extracts out of the Sixth Set; by Dr. Mortimer, R. S. Secret.

For the Months of July, and August, 1734.

- 12. Conjectures on the Charming or Fascinating Power attributed to the Rattle-Snake: grounded on credible Accounts, Experiments and Observations, By Sir Hans Sloane, Bart. President of the Royal Society, and College of Physicians, &c.
- II. Part of a Letter from Dr. Richardson, F. R. S. to Sir Hans Sloane, Bart. President of the Royal Society, and Colleg. Physic. concerning the Squilla aquæ dulcis.
- III. Schema Eclipseos Solaris paulo ante Solis occafum observata, Vitemberga Saxonum Die II<sup>do</sup> Maii Stil. veter. A. Chr. CIO IO CC XXXIII. A Joh. Frider. Weidlero LL. D. Mathem. Superior. Prof. Ordin. R-S. S.

- IV. An Abstract of the Meteorological Diaries, communicated to the Royal Society; with Remarks upon them. By W. Derham, D. D. Canon of Windsor, F. R. S. PART III.
- V. De AMBRAGRYSEA. Austore Casparo Neumanno, M. D. Chemiæ Profess. Berolin. & R. S. S.

I. Conjectures

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For the Months of Septemb. Octob. and Nov. 1734.

- J. De AMBRAGRYSEA. Austore Casparo Neumanno, M. D. Chemiæ Profess. Berolin. & R. S. S. PARS II.
- Water, in which Horses or other Animals draw without any loss of Power (which has never yet been practised) and how the Strokes of the Pistons may be made of any Length, to prevent the loss of Water, by the too frequent opening of Valves, with many other Advantages altogether new; the Model of which was shewn to the Royal Society on the 28th-of November, by Walter Churchman, the inventor of it.

- III. An Abstract of the Meteorological Diaries, communicated to the Royal Society, with Remarks upon them, by W. Derham, D. D. Canon of Windsor, F. R. S. PART IV.
- Woman, which were preserved 49 Years in the Moors in Derbyshire; being part of a Letter from Dr. Charles Balguy of Peterborough, to Cromwell Mortimer, M. D. R. S. Sec.
- V. An Account, by Dr. Richard-Middleton Massey, of a Book, entituled Locupletissimi Rerum Naturalium Thesauri, accurata Descriptio, &c. Vol. I. Amstel. 1734. in Folio. An exact Description of the principal Curiosities of Nature, in the large Museum of Albertus Seba, F. R. S. Vol. I. Amsterdam, 1734.

For the Month of December, 1734.

- I. De AMBRAGRYSEA. Austore Casparo Neumanno, M.D. Chemia Profess. Berolin. & R.S.S. PARS III.
- II. Editoris Recensio Experimentorum circa Ambram Gryseam à Domino Joh. Browne, R. S. S. & à Dno. Ambrosio Godofredo Hanckewitz, R. S. S. institutorum, cum D. Neumanni, R. S. S. Experimenti sui vindicatione.
- III. An Account of Mr. Thomas Godfrey's Improvement of Davis's Quadrant, transferred to the Mariner's-Bow, communicated to the Royal Society, by Mr. J. Logan.

- IV. The Description and Use of an Instrument for taking the Latitude of a Place at any time of the Day; by Mr. Richard Graham, F.R.S.
- V. An Abstract of the Meteorological Diaries, Communicated to the Royal Society, with Remarks upon them, by William Derham, D. D. Canon of Windsor, F.R.S. PART V.

J. De